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EXAMINER

NGUYEN, PHUOC H

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 10/04/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/704,016

Applicant(s)

BERKMAN ET AL.

Examiner

Phuoc H. Nguyen

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 52 is/are allowed.
- 6) ☒ Claim(s) 1,3-11,13-15,20-32,36-43,45-48 and 51 is/are rejected.
- 7) ☒ Claim(s) 2,12,16-19,33-35,44,49 and 50 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/5/06</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 13 is objected to because of the following informalities: claim 13 is same as claim 9. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5-6, 27-32, and 36 are rejected under 35 U.S.C. 103(a) as being obvious over Symonds et al. (Hereafter, Symonds) U.S. 6,039,245 in view of Colyer U.S. 6,023,722.
3. Regarding claims 1 and 27, Symonds discloses in Figures 1-2 a message queue management system configured to manage a plurality of queues including a first message queue of a first data store type and a second message queue of a second data store type, wherein the first message queue and the second message queue exhibit consistent behavior across a plurality of computer mediums (col. 1 lines 19-26), the message queue management system comprising: a journaling module (col. 7 lines 33-40 and col. 8 lines 37-40) configured to track and manage message states of messages stored in the first message queue and the second message queue (32) including a journalled state whereby journalled messages are retained in the first message queue and the second message

Art Unit: 2143

queue; a once-only message processing module (col. 9 lines 55-61) configured to track a plurality of message states to prevent re-processing of previously processed messages stored in the first message queue and the second message queue; an interoperability module (30) configured to coordinate interactions among the plurality of queues enabling a distributed workflow (col. 7, lines 16-26); a recovery module (62 and 64) configured to perform data recovery on the plurality of queues upon the event of a failure (col. 9 lines 62 through col. 10, lines 5); a central managing module (62) configured to provide single point control of the plurality of queues, wherein the single point control includes controlling a plurality of publishers (32 as databases) and a plurality of subscribers (e.g. POS terminals). Symonds fails to teach in Figures 1-2 a load balancing module configured to designate a subset of the plurality of subscribers to at least the first message queue in a subscriber pool such that messages in the first message queue are processed by a first available subscriber in the subscriber pool. However, Colyer discloses in Figure 1 an architecture of known load balancing module configured to designate a subset of the plurality of subscribers to at least the first message queue in a subscriber pool such that messages in the first message queue are processed by a first available subscriber in the subscriber pool (31). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add a load balancing module as seen in Colyer's invention into Symonds's invention because it would enable to enhance the system performance by avoiding single point of failure.

4. Regarding claims 5-6 and 29-30, they have limitations as load balancing as cited in claim 1. Thus, claims 5-6 are also rejected under the same rationale as cited in the rejection of rejected claim 1.

Art Unit: 2143

5. Regarding claim 28, Symonds further discloses in Figures 1-2 the message queue is configurable to run on a plurality of platforms (30) (col. 7, lines 22-26).
6. Regarding claim 31, Symonds further discloses the message information includes a message identifier and a message header (inherent format) (Figure 4).
7. Regarding claim 32, Symonds further discloses in Figures 1-2 the message header includes message state information (Figure 4).
8. Regarding claim 36, Symonds further discloses in Figures 1-2 the message state information is stored in a log that includes time stamps for the corresponding message states (60) (col. 9, lines 55-61; and col. 11, lines 6-48).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 3-4, 7-11, 13-15, 20-26, and 37-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Symonds et al (Hereafter, Symonds) U.S. 6,039,245.
11. Regarding claim 3, Symonds discloses in Figures 1-2 a message queuing system for computer networks that provides reliable communication, ensures non-repetitive delivery, and is implemented in a medium independent environment (abstract), the message queuing system comprising: a message queue (32 and 58) configured to run on

Art Unit: 2143

one of a plurality of environments and to store messages received from message publishers and monitor retrieval by a plurality of message subscribers wherein a message is retained in the message queue after at least one of the plurality of message subscribers has accessed the message to permit additional access to the message (col. 7, lines 32-43 and lines 62 through col. 8, lines 3; and col. 9, lines 45-53); a message state module (50, 62, and 64) configured to track message states of a message wherein message state information indicates whether the message has been made available to and retrieved by at least one of the plurality of the message subscribers (col. 8, lines 56-65; col. 9, lines 63 through col. 10, 1st paragraph); a recording module configured (62) to selectively retain the message state information related to corresponding messages at least until the message is removed from the message queue (col. 9, lines 63 through col. 10, 1st paragraph); and an interface module configured (30 and 34) to receive and send a plurality of types of data objects in messages and to communicate with a plurality of types of data messaging systems that act as message publishers or message subscribers (col. 7, 2nd paragraph, and lines 44-50).

12. Regarding claim 4, Symonds further discloses in Figures 1-2 at least one of the plurality of the data messaging systems acts as both a message publisher and a message subscriber (data to and from 32 and 34).

13. Regarding claim 7, Symonds further discloses in Figures 1-2 the message state information is used to ensure that messages are acquired in the designated order by at least one of the plurality of message subscribers (24, 38, and 40) (col. 6, lines 29-36; and col. 8, lines 4-20).

Art Unit: 2143

14. Regarding claims 8,9, and 13, Symonds further discloses in Figures 1-2 a message is intended for a single/plurality message subscriber(s) (18) (col. 6, lines 10-20).

15. Regarding claim 10, Symonds further discloses the message is deleted from the message queue during a designated clean up process (col. 37, 2nd paragraph).

16. Regarding claim 11, Symonds further discloses in Figures 1-2 the message is retained in the message queue to assist in recovery of messages during a system failure (62 and 64) (col. 9, last paragraph through col. 10, 1st paragraph).

17. Regarding claim 14, Symonds further discloses in Figures 1-2 the message state information includes message publisher state information and corresponding message subscriber state information (col. 9, last paragraph through col. 10, 1st paragraph).

18. Regarding claim 15, Symonds further discloses in Figures 1-2 the message state information is stored within the message (col. 9 lines 63-68).

19. Regarding claim 20, Symonds further discloses in Figures 1-2 the message queue is configured to interface with a plurality of different database protocols (32) (col. 7, lines 32-42; and col. 7, last paragraph through col. 8, 1st paragraph).

20. Regarding claim 21, Symonds further discloses in Figures 1-2 at least one of the types of a plurality of data messaging systems is a database (col. 7, lines 32-42; and col. 7, last paragraph through col. 8, 1st paragraph).

21. Regarding claim 22, Symonds further discloses in Figures 1-2 at least one of the types of a plurality of data messaging systems is a flat file directory (col. 7, lines 32-42; and col. 7, last paragraph through col. 8, 1st paragraph).

Art Unit: 2143

22. Regarding claim 23, Symonds further discloses in Figures 1-2 at least one of the types of a plurality of data messaging systems is a second message queuing system col. 9, lines 45-61).

23. Regarding claim 24, Symonds further discloses in Figures 1-2 at least one of a plurality of data objects is a database record (col. 7, lines 32-42).

24. Regarding claim 25, Symonds further discloses in Figures 1-2 at least one of a plurality of data objects is an electronic mail message (Other applications in Figure 2).

25. Regarding claim 26, Symonds further discloses in Figures 1-2 at least one of a plurality of data objects a web page (Other applications in Figure 2; col. 8, lines 56 through col. 9, 1st paragraph).

26. Regarding claim 37, Symonds discloses in Figures 1-2 a method for journaling a plurality of messages in a message queue, wherein the plurality of messages include a plurality of corresponding message states, the method comprising: receiving a message (listener in Figure 1), wherein the message includes a publisher message state and a subscriber message state; placing the message in a message queue (queues in Figure 1); changing the publisher message state of the message to a journalled state (MPP A) (col. 6, lines 43-53); and retaining the message in the message queue (Figures 19 and 28; col. 36, lines 24-51).

27. Regarding claim 38, Symonds further discloses in Figures 1-2 changing the subscriber message state of the message to a terminal state to prevent re-processing of the message (status 64 as seen in Figure 2).

28. Regarding claim 39, Symonds discloses in Figures 1-2 method of subscriber pooling a plurality of messages in a message queue, wherein the plurality of message

Art Unit: 2143

includes corresponding publisher states, the method comprising: placing a message in a message queue (queues in Figure 1); informing a plurality of subscribers that the message is available (col. 20, lines 38-49); and upon retrieval by one of the plurality of subscribers, preventing other of the plurality of subscribers from retrieving the message by changing the publisher message state to a terminal state (48 and 62).

29. Regarding claim 40, Symonds discloses in Figures 1-2 a system for message queuing among a plurality of message publishers and a plurality of message subscribers, the system comprising: a message queue module (queues in Figure 1) configured to communicate with a plurality of message publishers and a plurality of message subscribers and to receive a data object from a message publisher intended for at least one of a plurality of message subscribers (col. 7, 2nd paragraph, and lines 44-50); a data object processing module (28, 38, and 40) configured to process the data object to create a corresponding message wherein the corresponding message includes the data object and message information (Figure 4); a publisher tracking module (62 and 64) configured to track the status of the message from the perspective of the message publisher (col. 9 lines 55-61); a plurality of subscriber tracking modules configured to track the status of the message from the perspective of the at least one of a plurality of intended message subscribers (col. 9 lines 55-61); and a message tracking module configured to selectively retain the message to remain in the message queue after the message has been retrieved by the at least one of a plurality of intended message subscribers (Figures 19 and 28; col. 36, lines 24-51).

30. Regarding claim 41, it is the system claims of claim 29. Thus, claim 41 is also rejected under the same rationale as cited in the rejection of rejected claim 29.

Art Unit: 2143

31. Regarding claim 42, it is the system claims of claim 30. Thus, claim 42 is also rejected under the same rationale as cited in the rejection of rejected claim 30.

32. Regarding claim 43, it is the system claims of claim 31. Thus, claim 43 is also rejected under the same rationale as cited in the rejection of rejected claim 31.

33. Regarding claim 45, it is the system claims of claim 32. Thus, claim 45 is also rejected under the same rationale as cited in the rejection of rejected claim 32.

34. Regarding claim 46, it is the system claims of claim 36. Thus, claim 46 is also rejected under the same rationale as cited in the rejection of rejected claim 36.

35. Claims 47-48 and 51 are rejected under 35 U.S.C. 103(a) as being obvious over Symonds et al. (U.S. 6,039,245) in view of Clarke et al. (W.O. 95/10805).

36. Regarding claims 47 and 51, Symonds discloses in Figures 1-2 a method for queuing messages received from a publisher for retrieval by a subscriber comprising: storing messages using a queue (queues in Figure 1) and a queue interface module wherein the queue interface module is configurable to interface with a plurality of database protocols (interface of 26 or 24); extending message storage (32 and 58) beyond the time in which the message has been retrieved by all intended subscribers (col. 17, lines 64 through col. 18, lines 7). Symonds fails to teach tracking message states to enforce once-only delivery. However, Clarke discloses in the abstract a method of tracking message states to enforce once-only delivery (lines 7-11). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add tracking message states to enforce once-only delivery as seen in Clarke et al.'s invention into Symonds's invention because it would enable to enhance the system performance by reducing transmission.

Art Unit: 2143

37. Regarding claim 48, tracking message states includes tracking information related to message publisher states and message subscriber states (col. 28, lines 8-32).

38. Regarding claim 51, it is the system claims of claim 47. Thus, claim 51 is also rejected under the same rationale as cited in the rejection of rejected claim 47.

Allowable Subject Matter

39. Claim 52 is allowed.

40. Claims 2, 12, 16-19, 33-35, 44, and 49-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

41. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Symonds U.S. Patent No. 6,302,326 discloses a financial transaction processing system and method.

Gilbert U.S. Patent No. 5,530,848 discloses a system and method for implementing an interface between an external process and transaction processing system.

Hafner U.S. Patent No. 5,893,076 discloses a supplier driven commerce transaction processing system and methodology.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuoc H. Nguyen whose telephone number is 703-305-

Art Unit: 2143


5315. The examiner can normally be reached on Mon -Thu (7AM-4: 30PM) and off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuoc H. Nguyen
Examiner
Art Unit 2143

September 23, 2004



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